

IN THE CLAIMS:

**1- 47. (Canceled) .**

**48. (New)** A network arrangement comprising nodes and optical links interconnecting the nodes, characterized in that at least one node comprises:

a transceiver pool that includes a plurality of distinct connection points for coupling to customer equipment (CS-CPs), a plurality of optical connection points (OD-CPs), and a plurality of transceiver modules, with each transceiver module interconnected between one of said CS-CPs and one of said OD-CPs, and each transceiver module of said plurality of transceiver modules configured to modulate information provided by a customer to its CS-CP onto an optical carrier of a wavelength specified by a control signal, and to apply the modulated optical carrier to its OD-CP; and to demodulate an optical signal received from its OD-CP, to derive therefrom information that was modulated on an optical carrier signal of said specified wavelength, and to deliver the demodulated information to its CS-CP; and

an optical director element that includes a plurality of local connection points that are each coupled to a different one of said OD-CPs, and at least two long-haul optical connection points, each connected to a fiber of a different one of said links and configured to accept an information signal as well as to deliver an information signal, where optical signals flowing through said local connection points and through said long-haul connection points are routed within said optical director solely in optical form, under control of an applied electrical control signal.

**49. (New)** The network of claim 48 where said control signal that affects the transceiver pool and said control signal that affects the optical director element are unrelated to any network fault indication.

**50. (New)** The network of claim 48 where said control signal that affects the transceiver pool and said control signal that affects the optical director element are related or unrelated to any network fault indication.

**51. (New)** The network of claim **48** further comprising a service layer device that is interposed between customer signals and the CS connection points.

**52. (New)** The network of claim **8** where said service layer device performs a routing, or a multiplexing function.

**53. (New)** The network of claim **48** where signal at a CS connection point is electrical.

**54. (New)** The network of claim **1** where signal at a CS connection point is optical.

**55. (New)** The network of claim **48** where said optical director comprises a switch connected to said local ports; and  
an optical routing element connected to said switch and to said other ports.

**56. (New)** The network of claim **48** further comprising a management network for communicating said control signals.

**57. (New)** The network of claim **56** where the management network is distinct from said network.

**58. (New)** The network of claim **48** further including in-band control signals that flow through said network to provision nodes of said network.

**59. (New)** The network of claim **48** further including out-of-band control signals that flow through said network to provision nodes of said network.

**60. (New)** The network of claim **48** where said transceiver pool is embedded in said optical director.

**61. (New )** A method for controlling a network that includes nodes, and links that interconnect the nodes, where a node of the nodes executes a process comprising the steps of:

provisioning a tunable transceiver of said node to communicate substantially all of the information of an applied signal of a customer to a local connection point that is coupled to a controllable optical director of said node, where

the communicated information is modulated onto a wavelength specified by a control signal applied to said tunable transceiver,

an optical signal that carries data modulated onto a carrier at said wavelength and which arrives at said local connection point from said optical director is demodulated and provided to said customer, and

control signal is other than indicative of a failure condition; and

provisioning said controllable optical director to transfer bi-directional optical signals at said local connection point that have said specified wavelength to one of at least two long-haul ports of said optical director that is specified by a control signal applied to said optical director, where each of said long-haul ports is configured to carry signals from a different link of said links to said optical director, and from said optical director to said respective different link, said transfer being via essentially all-optical communication paths within said first controllable optical director.

**62. (New)** The method of claim **61** where the provisioning of said tunable transceiver to communicate substantially all of the information of an applied customer signal to said first bi-directional local connection point does not communicate error control signals contained in said information.

**63. (New)** The method of claim **61** where the control signals are applied to said first node in response to a request for provisioning from another node of said network or from an entity that has management control over the network.

**64. (New)** The method of claim **63** where the request arrives from said entity pursuant to a process that rearranges provisioning in said network.

**65. (New)** The method of claim **64** where the rearranging of provisioning is in response to changes in network load conditions.

**66. (New)** The method of claim **65** where the changes in network load conditions arise from network faults.

**67. (New)** The method of claim **61** where the control signals are applied in response to a fault condition detected in the network.